

MELVILLE (H.)

THE MODERN TREATMENT

OF

PULMONARY CONSUMPTION

AND OTHER

DISEASES OF THE RESPIRATORY ORGANS,

BEING

SUGGESTIONS TO INVALIDS ON THE MOST RATIONAL METHOD OF CURE.

BY

HENRY MELVILLE, M.D.

CONSULTING PHYSICIAN FOR DISEASES OF THE CHEST.



NEW YORK:

54 WEST TWENTY-EIGHTH STREET.

1859.

THE MODERN TREATMENT
OF
PULMONARY CONSUMPTION

AND OTHER

DISEASES OF THE RESPIRATORY ORGANS,

BEING

SUGGESTIONS TO INVALIDS ON THE MOST RATIONAL METHOD OF CURE.

BY

HENRY MELVILLE, M.D.

CONSULTING PHYSICIAN FOR DISEASES OF THE CHEST.

Surgeon Genl's Office
LIBRARY
28443
Washington, D.C.

NEW YORK:
54 WEST TWENTY-EIGHTH STREET.

1859.

THE
MODERN TREATMENT
OF
CONSUMPTION.

LECTURE I.

INTRODUCTION.—THE MEANS HERETOFORE EMPLOYED IN
THE TREATMENT OF CONSUMPTION.—CLIMATE, ETC.

MEDICINE is as old as the world. Wherever we find man, there we find also diseases and the effort to cure them. "Doctor, heal me!" is a petition which the instinct of self-preservation puts upon the lips of every suffering being, be he rich or poor, learned or ignorant, Christian or idolatrous. From the earliest periods of time Medicine and Religion have proceeded together as faithful companions. The *body* and the *soul* make up one complete being. It is meet, therefore, that *Religion*, the consolation and strength of one, should be attended by *Medicine*, the help and comfort of the other. Indeed, in the old days, the functions of the physician were administered by the priests and patriarchs. The balm of healing came from their hands, as the balm for the troubled spirit came from their lips.

The *body* and the *soul* make up our being, but each is separate and independent. The body has its *life* in common with all animated nature, which endures while the machinery holds together, but ceases when the body goes to decay. The soul has an eternal existence, which begins after the life ceases and the body has crumbled. Life is the vital spring which keeps the machinery in motion until it has become clogged by our imprudence, or worn out by age. How beautifully our Saviour exemplified the mutual dependence of the body and the soul—of religion and medicine—upon each other. While with sweet and divine eloquence he vivified the soul, with omnipotent hand he healed the sick of their maladies.

The mission of a doctor of medicine requires all the virtues of the heart united to all the strength of the mind. No man is fitted to be a physician who is not modest and prudent from nature. Gentleness and sympathy are necessary to encourage and console the sick—firmness to resist their whims and importunities—dignity to silence frivolities and command respect for counsels.

Chief among the ills to which our bodies are liable, and by which our lives are endangered, stands *Pulmonary Consumption*. For centuries this disease has been the great scourge of our race, and yet to the present how little has been done to diminish its fatal ravages!

Now the matter of real interest and importance to us is not whether this or that theory with regard to the disease be correct, but whether *consumption is a curable disease*. You have so long been accustomed to regard the symptoms of consumption as the *hand of death*, and have so constantly witnessed the failure of every method of practice, that you have grown superstitious in regard to this disease, and your convictions of its incurability

The subject is one which claims your serious attention, and cannot be devoid of interest to all who entertain any regard for your welfare. I cannot conceive, therefore, that this effort to put before you a fair statement of the means usually recommended, and those which I conceive to be best adapted to cure so formidable a malady, will be regarded as either unnecessary or ill timed.

There are some climates and countries where Consumption is comparatively a rare disease, but in this climate and country, and, indeed, in all temperate latitudes, few can say its fatal shadow has not fallen on their own threshold, and none can feel perfectly assured that they are themselves safe from its treacherous advances.

ON THE MEANS OF CURE HITHERTO EMPLOYED.

When we find not a single nation only, but the entire civilized world, united in the belief that Consumption is an *incurable* disease, I need go no further to ask what has been the success of the treatment heretofore employed.

Some two hundred years ago Dr. Morton, a distinguished English physician, and a man of great authority in his day, advanced an erroneous theory, the basis of which was stated as follows:—"Consumption being the result of inflammation of the lung structure, bleedings, frequently repeated, are the proper remedy" From this time it became very common to bleed from the arm, and to apply leeches over the chest. The aim was to subdue the inflammation, on which the disease was believed to depend. After a time it became known that inflammation rarely if ever produced tubercles, and the theory

was abandoned, but not so the practice of bleeding. This had become habitual, and it was continued, though of late years few, except in the early stages of the disease, have had the boldness to employ it. In the incipient stage it is still employed, and to its pernicious influence in weakening the powers of life, many persons, merely suffering at the time from irritation of the air-passages, owe the subsequent development of tubercles. Consumption is essentially a disease of debility. The powers of life are always weak before it is set up. They become still more feeble as it advances. If we would save the patient, we must support his strength to the utmost, at the same time that we arrest the disease which is exhausting him. Bleeding, then, even in the first stage, only prostrates the system, and brings it more fully under the control of the disease, which, as a consequence, runs a more rapid course.

Let it not be supposed that this practice is not supported by many great names. It is advocated in the works of the famous Dr. Mead of London, Dr. Dovar, Sir John Pringle, Dr. Fothergill, Dr. Munro, Dr. Cheyne of Dublin, and the late Dr. Hossack of New York. I mention these names merely to show you that this treatment was recommended and practised freely until within the last few years. As to its influence, I have only one opinion, and that is, that it only weakens the powers of life and hastens the progress of the disease.

Another class of physicians equally learned and orthodox with the advocates of bloodletting, place their hopes on Emetics. These were first prescribed on the erroneous idea that Consumption was mainly caused by disorder

of the stomach, resulting in imperfect formation of chyme. Among the advocates of emetics, are many physicians of sufficient note to hold position as professors in American and British medical colleges. The frequency of their use depends very much on the caprice of the physician. Dr. Reed advises the patient to "*to take an emetic every morning and evening for months.*" Simmons orders them only "*twice a week,*" and Dr. Vittis "*every morning.*" There is also the same discrepancy in regard to the kind of emetics that are to be employed. One orders "*squills,*" another "*tartar emetic,*" a third "*ipecac,*" while a fourth will only use "*sulphate of copper.*"

I should not think it necessary to say anything in condemnation of this absurd and cruel practice, were it not for the fact that it is constantly prescribed by medical men in good standing in the profession. I have had under treatment many persons who have been thus treated. "The idea," said one of these to me the other day—"of curing consumption by turning the stomach inside out every morning, and straining till the blood rushes to the head and face, is something I cannot understand." Nor could any person understand it who knew anything of the operation of emetics, or the nature of consumption. It is not too much to characterize this practice as calculated to exhaust the strength in efforts which have no possible curative influence over the disease, while it invariably destroys the tone of the stomach.

Mercury is another and one of the oldest remedies relied upon for the cure of consumption. It was strongly recommended at a period when it was a kind of specific for all diseases, and when the nature of consumption was but imperfectly understood. As more rational views

began to prevail, mercury fell gradually into disrepute ; in the end it came to be looked upon with distrust. *Many* openly accused it of *producing* consumption when administered for the cure of *other diseases*, and of *hastening* it when prescribed for its *arrest*. Unhappily for mankind, just at this period Dr. Wilson Philip's book "*on the influence of small doses of mercury*" appeared, and at once revived the practice. Physicians came to the conclusion that they had not understood its proper manner of use in chronic diseases, that they had given it in too large doses, and that by now following the suggestions of Dr. Philip they would accomplish better results. More than twenty years have since elapsed, during which period the profession have been experimenting on the subject. What is the issue of such experiments? An almost universal conviction that, as a practice, it is "*decidedly injurious*." As an alterative, the majority of medical men continue to give mercury in this disease, not probably from any particular faith in its efficacy, but because they must do something. It used to be given as "*blue pills*," as "*calomel*," and the "*corrosive chloride of mercury, combined with tincture of bark*." Now it is generally disguised by being combined with some sedative, as *opium*, *hemlock*, or *hyoscyamus*, which its advocates tell us modifies its injurious effects. Supposing this to be true, of what possible utility has it ever been? How many thousands have taken this remedy within the past *twenty years*, and because it was prescribed by the *family physician*, blindly placed their hope of recovery upon it? Now the same physician tells us it is injurious. If it is so *now* it must have been so *then*. The intimate relationship existing between *scrofula* and *consumption* should

have long since taught the profession the *folly* and *danger* of employing this agent. If there is one medicine more *injurious* than another in scrofulous constitutions *that* medicine is *mercury*. Persons *perfectly healthy* are rendered scrofulous by exposure to its influence. When *long administered*, it produces a condition of the system bearing *all* the characteristics of *genuine scrofula*. The *workmen* engaged in *quicksilver mines* all fall a prey to scrofula or consumption at an early age. With *these facts* before them, *how* it has happened that physicians have continued to persist in the administration of mercurial remedies in *consumption*, is beyond human comprehension.

Another theory regards Consumption as always a disease of *debility*, and prescribes for its cure *tonic medicines*. The *inflammatory* theory supposes that the tone of the system is *too high*, and prescribes bleeding to reduce it. The *debility* theory, on the contrary, regards the tone of the system as *too low*, and prescribes tonics to raise it! The tonic practice, within the past few years, has had many advocates. Unfortunately for this class of medicines they have very little power over diseases depending on *organic* changes. *Functional* diseases, attended by debility, are always benefited by their use, but organic maladies rarely. In consumption they have no power either to cause the absorption of the tubercles or to promote the healing of ulcers. If the stomach is weak they have the merit of strengthening it, and at the same time of improving, temporarily, the appetite. This is the full extent of their usefulness. The tonics most approved are "*Peruvian bark*," in powder or tincture, "*Quinine*," and the different preparations of "*Iron*." Let no patient allow himself to be misled on this subject. Tonics in

consumption exert no influence beyond temporary palliation.

Next we have the Sedative and Diuretic Practice.—In this class *Digitalis* has held the chief place in the confidence of the profession. In 1783, Dr. Withering pointed out its strong diuretic properties, since which time it has been alternately extolled as a specific, and condemned as injurious in consumption. “It is now,” says Dr. Cowan, “very rationally almost entirely rejected as a cure.” The truth is, those who have been the loudest to proclaim its merits cannot agree among themselves, either as to its dose, action, or properties. On the subject of the latter, Dr. Reid thinks it a *stimulant*; Saunders a *tonic*; Hamilton a *sedative*; Kinglake a *narcotic stimulant*; while Magennis thinks that it “acts by the retraction of morbid action.” Of late years it has been almost entirely superseded by opium and lactucarium. I may safely characterize digitalis as an old exploded remedy, which is only employed by those who will not profit by the lessons of experience—far more often *pernicious* than *inert*—and never under any circumstances *curative*.

Another medicine which, when it first came in vogue, was largely given as a specific, is Iodine. The theory upon which it was prescribed in consumption is essentially different from either the *stomach*, the *inflammatory*, or the *debility* theories, to which I have just referred. The advocates of iodine contended that the disease consists in the presence of a specific poison in the blood, which poison vitiates the whole system, and gradually produces a condition ending in the deposit of tubercles in the lungs. This state of the blood they proposed to change by iodine. *Experience*, however, has proved that

although a most powerful alterative and resolvent medicine, when carefully administered in proper forms and doses, it cannot be regarded as more than a palliative, for we do not find that under its use the number of deaths were lessened, while its action on the stomach, unless most cautiously employed, is always severe, and in many instances so unpleasantly so as to entirely destroy its tone. *Now* it is commonly given in its mildest form, and merely as an alterative, in very small doses. *Some* few physicians think they have observed benefit from its use. *A still larger number* repudiate it as worthless; *while a few*, among whom is the learned Dr. Stokes, of Dublin, denounce it as injurious.

There are fashionable medicines as well as fashionable garments, and each flourishes for a brief period, and then disappears to give place to another. In this manner iodine gave place to cod-liver oil. This nauseous and disgusting substance a few years ago became the great quack medicine of the faculty. Every patient took it. Every doctor who failed to prescribe it was behind the age. A few years have passed, and all this delusion is dispelled. *Now*, we know that it has no curative properties whatever in consumption. It is simply good nourishment, and nothing more. The best commentary on its effects is to be found in its SALES. Five years ago there was more cod-liver oil sold in this city alone, in a single month, than is sold now in the whole Union in the course of a year! Another and very significant fact is to be found in the bills of mortality. They were never higher than when everybody was swallowing bottle after bottle of "*Pure Cod-Liver Oil.*" A reaction has taken place in the public, and in the professional mind. No intelligent observing phy-

sician now prescribes the oil as a medicine. If the patient is losing flesh it will *fatten* him, and save his strength for a short period ; but if he is not losing flesh it is worthless, and likely to disagree with the stomach, while, if there is *diarrhœa*, or a strong predisposition to hemorrhage, it is liable to do injury by increasing the tendency to attacks.

There are three great channels through which medicines may be introduced into the system. It will be observed that those medicines of which I have just been speaking are all given by the stomach. I now come to speak of medicines which are applied to the skin. These are of two kinds:—First, those which are intended to be absorbed from its surface into the system ; and *second*, those which act only upon the skin, producing an irritation which, on the principle of a blister, it is supposed will draw the disease to the surface. The practice of applying *irritating* substances to the chest is of very old date. Formerly the iron heated to a white heat was employed to burn little holes into the muscles of the chest, and these were then kept discharging by irritating ointments. Another process was to burn a little coil of calico saturated with saltpetre, on the chest. Of late, doctors have grown more humane, and are satisfied with creating a crop of large festering pustules, resembling those of small-pox, by rubbing into the chest an ointment made from tartar emetic. Croton oil is frequently used for the same purpose ; blisters, mustard plasters, and the like. These applications came into use with the false theory which inaugurated the bleeding and mercurial practice, and are therefore, as remedies for the *cure* of consumption, far more hurtful than beneficial. They cannot possibly exert any influence on the tuber-

cular deposits, or on the progress of softening and ulceration. All the good counter-irritants do is, in relieving pain where the covering of the lung becomes involved in disease. The lungs themselves rarely manifest their disease by pain, but the slightest irritation in the pleura is attended by acute suffering. To relieve this, anything which will produce an irritation on the skin is beneficial. But all substances which will irritate are not equally beneficial. The mildest capable of affording relief should always be preferred to the stronger. For this reason a *mustard plaster* is better than a *blister*, and a blister better than Croton oil, and Croton oil better than tartar emetic. But far better than either of these is a mild stimulating and anodyne liniment, composed of camphor, arnica, and acetic tincture of mustard. If the patient is feeble, and the powers of life weak, the nervous irritation, induced by the use of strong pustulating ointments and issues, is always very objectionable. It is a *torture* to the patient, and adds to the local congestion of the lungs. Let it then be distinctly understood that no substance rubbed into the skin exerts any curative influence over tubercular disease of the lungs, beyond the relief they afford to pleuritic and other pains, and for these the mildest are the best.

I approach the consideration of "Climate" with some hesitation, because here, again, I must join issue with the prejudices of the public, and the practice of many of the profession. Without any regard to the circumstances of the patient, or the stage of his disease, it has become the custom to prescribe "*change of climate.*" Nothing can be more cruel to the sufferers than this. In the case of the poor, who cannot of course afford the expense, it is

doubly so, as it opens the door to regrets which are likely to harass the mind when it most requires repose. And even when the advice can be followed by those of larger means, what are the effects? In most instances, the disease progresses more rapidly to a fatal termination, and in many, the expatriated invalid finds a foreign clime but a foreign grave!

Taken from his home and the association of his nearest connexions, who would have soothed his sufferings by a ready anticipation of all his wants, he finds himself in a strange land, surrounded by persons to whom his fate is a matter of indifference, recognising even in those who administer to his necessities, the harpies who perform ungraciously, for hire, what, in the home he has left, would have been cheerfully rendered for affection.

In even the earliest stages of consumption, climate has but little influence—especially true is this, if there has been spitting of blood. After this symptom has made its appearance, I never knew a case where anything beyond a temporary palliation was derived from climate, and rarely even this. If there is much cough, if there be pains in the chest, indicating irritation of the pleura, or if any portion of the chest sound dull on *percussion*, the disease will only be *hastened* by the tedium and privations of the journey.

In the *advanced* stages of consumption, after the hectic fever is established, no act of ignorance and inhumanity can possibly be greater than to send the poor sufferer wandering over the earth. Many are led to believe they are about visiting some earthly paradise, where they will forget their cares, and find a cure for their maladies—where the air bears a healing balm to the lungs, and the water quenches the hectic thirst; all

nature seeming to unite in ministering to their relief. But, alas! experience soon dissipates "*into air—thin air,*" this vain delusion. They discover neither the "*land of promise,*" nor the *cure* for which they are in search; but learn, amid bitter regrets, that they must bear the fatigues and privations of a long journey, and then hasten home *to die.*

Flood eloquently and touchingly depicts the cruelty and irrationality of the practice of sending patients to distant parts. "I have witnessed," says he, "the ill effects of sending a consumptive patient to a foreign land, especially where disease is at all advanced; and I know that nothing can be more irrational, nothing more cruel than to tear him away from the home and the friends that he loves, when each one around him is able by some little act to minister to his wants, and make him, from time to time, forget his condition, and banish him for the sake of climate, to some place where comfort is unknown; where his necessities and peculiarities are neither reciprocated nor understood; where, an alien amid unsympathizing people, he is left to feel the dim flame of existence flickering out; his latest hours harassed by the thought that, perhaps, with the exception of his own sole companion, he will die unpitied and unwept, and will lie far from the grave of his fathers, in some spot which none will hallow for his sake."

"All this might be prevented, and it is the bounden duty of the physician *to prevent it*, instead of, as too often is the case, proposing the change, apparently with no other object in view than to get rid of a troublesome patient, whose malady he knows not how to treat."

Past experience goes to prove that there is nothing curative in the air of those places to which invalids resort

for health. When the body is not already greatly enfeebled by the disease, the journey, the absence from the cares of business, and the greater amount of exercise taken in the open air, unite to improve the general health. But the local disease is seldom arrested by such improvement. The air of the most favored resorts possesses no virtue to heal the lungs when diseased, nor yet to protect them from becoming diseased. This is proved by the fact that consumption is very common among the natives of all the Southern coast. At St. Augustine, Jacksonville, and Tampa Bay, *one fifth of the adult population die of Consumption*, and the same is true of Havana and all the West India Islands, and of the most celebrated European resorts—Marseilles, Nice, Rome, Naples, Villa Franca, and Madeira.

Dr. Forbes, the learned editor of the British and Foreign Medico-Chirurgical Review, tells us that during a residence of five years at Penzance, a place very much resorted to by consumptives, he is sorry to say that in the great majority of cases change of climate was not beneficial. In no case of well defined consumption did he witness a *cure*, or even a temporary *palliation*, that could be fairly attributed to climate. And if we add to this the fact that, in all cases where the pulmonary tubercles are in a state of *softening*, or become softened during the sojourn of the patient in a warm climate, the malady is hastened and runs a much more rapid course to a fatal termination, invalids will realize some of the dangers to which they expose themselves. It will not *do* for them to shut their eyes to these facts. Health is not a matter, with which they can trifle, without suffering the full penalty of the folly.

Sir James Clark, who practised for ten years at Rome,

and has written a valuable work on climate, tells us that *inflammation of the lungs appeared to be more violent and more rapid in its course than in England and other northern countries. This remark does not apply to Rome only, but I believe to the whole of Italy, and to warm climates generally.* When at Dresden, Dr. Krey-sig, of that place, remarked to me that he had never witnessed such violent cases of pneumatic inflammation in Germany, as he saw during his stay at Pavia.

Dr. James Johnson, the famous author on the influence of climates and journeyings upon health, gives us the following as the result of his experience.

“The sum total of our knowledge, on this important point, appears to stand thus:—I. In DELICATE HEALTH, without any proof of organic changes in the lungs—in what is called a ‘tendency to pulmonary affection,’ a journey to Italy, and a winter’s residence there, (under strict caution,) offer probabilities of an amelioration of health. II. In cases where there is a suspicion or certainty of tubercles in the lungs, not softened down or attended with purulent expectoration, an Italian climate *may* do some good, and *may* do much harm—the chances being pretty nearly balanced. III. Where tuberculous matter appears in the expectoration, and where the stethoscope indicates that a considerable portion of the lungs is unfitted for respiration, a southern climate is more likely to accelerate than retard the fatal event, and takes away the few chances that remain of final recovery.

“If this be a correct estimate (it is at least an honest one) of the influence of an Italian climate on constitutions disposed to, or affected by PULMONARY CONSUMPTION, it shows that *medical men incur a fearful responsibility in*

proposing to the parents and friends of invalids, a measure which is fraught with danger, involved in uncertainty, and too often attended by the most destructive sacrifices of the feelings as well as the finances of the parties concerned!

“Heaven forbid that, on such a momentous question as this, involving the lives of my fellow-creatures, I should throw the weight of a feather in the scale against the preservation, or even the prolongation of human existence; but I have lived too long, and seen too much, not to know the errors of discrimination and the fallacies of hope, that send PULMONARY invalids from the gloomy skies but comfortable abodes of England, to lands where comfort is unknown.”

What say the ablest and best writers themselves? Do they teach that any of these means to which I have just referred will cure consumption? So far from such being the case they proclaim the very reverse; deplore the poverty of their resources, and prophesy that the day will come when such will cease to be true. Listen to the confession of the professors and wise men of our profession, and then judge for yourself. Dr. Walsh, one of the physicians of the celebrated “Hospital for Consumption,” London, and author of the work on the Lungs, which is used as a text-book in all the Medical Colleges, remarks on the subject of bleeding — “experience recognises not only the general inutility, but the actual mischief of bleeding, general or local, with the view of curing Consumption;” and on the emetic plan. The treatment of Consumption by daily emetics “cannot appeal to experience in its favor,” the most he can say in its behalf is that “it does *less mischief* than the morbid anatomy of the stomach would lead us to

expect"—P. 362. That it does *some* mischief he does not doubt—"The treatment of acute consumption," he continues, "is far from being understood." He repudiates iodine, naphtha, and other remedies in common use with the utmost contempt.

Dr. Stokes, physician to the Meath-Hospital, Dublin, tells us that "it unfortunately happens that the *palliative treatment* is the one which we must generally follow; but there can be no doubt that as medicine advances, the cures of consumption will be much more frequent" (page 409).—Why must we, in Dr. Stokes' opinion, pursue the palliative treatment! Simply because the best treatment known to him was not able to accomplish more. When medicine "*advances*," he believes, we may hope to pursue a *curative* one. Now, what does he mean by *advances*, if it be not the discovery or application of some improved method of treatment? Of "iodine" the same writer remarks, "I have not in the text alluded to iodine, because I believe that as yet no case has been made out in its favor; that its employment is generally adopted on the ground of false analogy, and in ignorance of the pathology of tubercle, cannot be denied, and the consequence is what we might expect, that it is the favorite remedy of the harpies of medicine" (page 427). This is pretty strong language to apply to the advocates of iodine, among whom we may rank many of the most prominent members of the profession, both in Europe and America. Dr. Stokes favors the practice of bleeding so strongly condemned by Dr. Walsh, and lauds the mercurial treatment, of which the American editor of his work remarks, in a note on treatment:—"The mercurial treatment of consumption is, we fear we must add, no novelty in American prac-

tice. Some lives may have been saved by it, but in return how many have had their deaths accelerated by this means?" (P. 434.)

Dr. Billings, in his "Principles of Medicine," very frankly admits that "the application of remedies in phthisis has been in many cases *empirical*, often *inert*, and sometimes *mischievously active*" (p. 323).

The great Laennec says, "It is a popular belief that consumption can be cured, if it is only taken in the early stage." This, he tells us, is a great error, that every hope of recovery depends on its progress to the last stage, that the tubercles must soften and be expelled. He believes in the entire curability of the disease, but has no confidence either in his own knowledge of the proper remedies, or in any treatment known to the profession. "Bleeding," says he, "can neither prevent the formation of tubercles, nor cure them when formed."

Louis, the latest and highest authority on consumption in France, in a volume of 400 pages, sums up the treatment in *six*, and even these do not contain one new suggestion or remedy to improve the therapeutics of the disease. He condemns many remedies high in favor with the profession as hurtful or worthless, and observes, in regard to the insertion of *setons*, *issues*, and the application of *Croton oil* and *Tartar emetic*, counter-irritants to the chest, "neither in hospital nor in private practice have I, in a single instance, seen any amelioration produced which could be attributed to them." And yet no physician ever enjoyed such ample opportunities for judging impartially of their effects. The doctrines of Broussais and his theory of the inflammatory origin of phthisis had given an impetus to the employment of counter-irritants, which, as a consequence, soon became general,

both in private and hospital practice in Paris. We need not say anything of Louis' standing in the profession. All American gentlemen, who have travelled in Europe, know his pre-eminence. Dr. Marshall Hall observes of him: "M. Louis certainly ranks as the first physician of France, and probably of Europe." When, therefore, we find such an authority confessing, as he does, the worthlessness of all those remedies which have been relied upon by physicians for the cure of consumption, we may safely assume that ordinary medication affords the patient no hope of recovery, and that if he is cured it will be by resorting to a more rational method of treatment.

"Let us remember," says Dr. Cowan, the learned translator of M. Louis' great work, "*Traité de la Phthisie*"—"that we are still in the infancy of medicine, still standing on the shore with the boundless ocean of *undiscovered* truth in our view;" and continues, "we cannot help anticipating that the cure and comparative extinction of phthisis (consumption) are among the benefits the *future* progress of medicine will confer upon mankind." (Translation of Louis, page 56.)—Again: "Notwithstanding all that has been written and done upon the subject of consumption we are still *totally* unacquainted with anything like a satisfactory method of cure" (page 521). These are the confessions, not of obscure physicians, but of the shining lights—the great teachers of the art. Are they not worthy of credit? Will you not believe their statements? If you do not, you shut your eyes and your understanding, to the only source of enlightenment open to you; but if you do then is it rational to strive and hope, to trust and believe, that your case is to be saved through these means, though all

others are lost? Ask yourself, in sober earnest, whether, in the face of this testimony, you can still delude yourself into the belief, that yourself, your friend, or your relative, will be restored by continuing in the same course.

Dr. Cotton, assistant physician to the Hospital for Consumption, London, in a work on this disease, has the following sensible remarks on the practice still carried on of many physicians:—"To check the frequency of the pulse, *bleeding* and *sedatives* were resorted to; to diminish and cure the cough, *antimony* and other depressing medicines were administered. And, with the view of causing the absorption of tubercle, *emetics* were prescribed. But when we consider the nature of the tubercular disease, it is evident how *fraught with danger* such practices must be! Could it be accomplished, it would be far better to add than to abstract blood; the pulse is more easily reduced by invigorating the system than by lowering it; and wine, judiciously given, will lessen its frequency better than *digitalis* would do; whilst *emetics*, by exhausting the patient, tend rather to aggravate the disease than otherwise." (Cotton on Consumption, p. 222.)

Prof. Watson, of King's College, London, in his "*Practice of Physic*," observes on the difference of opinion which prevails among physicians:—"You will find a great discrepancy of opinion among authors and among practitioners with whom you may converse in respect to the regimen which consumptive patients should follow. One man gives all his consumptive patients beefsteaks and porter; another restricts all his to vegetables and asses' milk!"

I have, perhaps, dwelt too long on European writers.

If so, it has been because their works are the text-books of the colleges of this country. There are comparatively few works on consumption written in America. But let us pass *these* in review as representing more fully and fairly the American view of the case. I will take the splendid work of the late Dr. Swett, of this city, published some three years ago. Dr. Swett was for many years one of the physicians of the New York Hospital, and at the time of his death held the responsible trust of a professorship in the New York University. That he was a man of sterling ability, none, who knew him, will call in question. Had he left us no other proof of his indefatigable zeal in the pursuit of his profession than his "Treatise on Diseases of the Chest," it would have been amply sufficient to earn him a high niche in the temple of fame. Well, then, we may safely take Dr. Swett's work as a fair exponent of the practice of the profession in this country. In answering the question: "*Is phthisis a curable disease?*" he observes, "the *general impression in the medical profession* is, that a patient with phthisis is doomed to death" (p. 277). Why does this impression exist?" Simply, because almost every case results in death! "If," continues he, "those cases only are considered, in which the disease is strongly marked, and which are so advanced in their progress that the diagnosis is easy, this opinion is, on the whole, well founded; yet even under these circumstances, *unexpected* recoveries take place" (p. 278). What does this mean but that if the disease is sufficiently advanced to be detected the case is hopeless, or if recovery does take place it is an "*unexpected*" result, which could not be anticipated to follow the treatment employed. It may be well to state, that Dr.

Swett was a strong advocate of the *curability* of the disease, but honest enough to confess that the profession, to the present, has not discovered the *means* of curing it. "I admit," says he, "as all must do, that phthisis is a most fatal disease, and that the prognosis is *always unfavorable!*" What does he mean by the term prognosis? He means that the opinion you must form of the chances of recovery is "*always unfavorable.*"

After considering the general details of the regimen to be observed by physicians in the treatment of their consumptive cases, Dr. Swett passes to the consideration of the virtues of the remedies which are commonly employed in this disease. The following summary will show the reader how feeble are the chances of recovery, from pursuing the best course known to the profession:—

"I willingly admit," he continues, "that *no remedy* has as yet been discovered which appears to exert any specific influence upon tubercles, either in preventing their development or in promoting their cure. *Antimony, digitalis, iodine* have all had their day of imaginary success, and all been forgotten. *Cod-liver oil*, the present [1853] popular remedy, is destined to experience the same fate. It has not, in my *opinion*, any specific influence on consumption; it has not, in my *experience*, performed any wonderful cures. * * * It is good nourishment—nothing more; and I think it very probable that other kinds of oil equally well prepared, may exert the same beneficial influence" (p. 309).

A little more than four years have elapsed since this opinion, in regard to cod-liver oil, was expressed by Dr. Swett, and *now* it is the universal opinion of all physicians who have carefully noted its effects. On the practice of bleeding consumptive patients, Dr. Swett remarks:—

“Those practitioners who regard the deposit of tubercles as one of the effects of inflammatory action, and who mistake the symptoms of irritation which they create for those of inflammation, have been led to adopt a practice in the early stage of this disease highly injurious to the welfare of the patient. Bloodletting has been resorted to, and repeated from time to time, *leeches* have been applied to the chest, and *low diet* recommended, with antimonials, in the *vain hope* of removing the cause of the disease.”

Dr. Swett next sums up the preceding observations on treatment, and lays bare the poverty of the resources of the usual practice. I particularly recommend the following paragraph to the attentive consideration and calm reflection of all consumptive persons:—

“*Use as little medicine as possible, and only to correct certain symptoms which may be easily removed. Remember there is no specific remedy in phthisis. * * ** In the advanced stage, as the powers of digestion fail, they may require the support of tonics and stimulants. Local irritation will require direct means to check its progress. *Opium*, in small doses, is the best means you possess. *Diarrhoea* must be controlled by opium and mild astringents. *Night-sweats* must be checked by mineral acids, and by the aid of astringents; and finally, the close of life must be solaced by simply attending to the immediate comforts of the patient.” (p. 317.)

And Dr. Gerhard, of Philadelphia, holds a similar doctrine. He regards the medical treatment of this disease to consist of an effort to “*remove accidental complications or conditions of the body which favor the growth of tubercles, rather than by acting upon the tubercular secretion itself.*” We are, in his opinion, to treat the *symptoms*, and leave the *cause* undisturbed. We are NOT to strive to *remove* the tubercles, or to *prevent* their

softening. The tubercles are to be permitted to pass from the *first* to the *second*, and from the *second* to the *last* stage, without our making the least effort to get rid of them. From the first to the last the whole treatment is one of palliation. The utmost that can be expected to result from it is, to prolong the life of the patient a few weeks, or, at most, a few months. I doubt that it even does this. On the contrary, I believe it more frequently hastens his death than prolongs his life. Certain it is that the *opiates* and *expectorants* that are given by most physicians destroy the tone of the stomach, and hasten the emaciation. But be this as it may, what do these confessions prove? They prove that no medical man, guided by the books or the colleges, can promise those laboring under consumption more than *palliation*. Let this be ever remembered. Let none delude themselves into the belief, that, because their disease is in its incipient stage—"only just commencing," or their lungs but "*very slightly affected*"—they are in no danger. "*Remember*," says Dr. Swett, "*that there is no specific remedy in consumption*;" and again, "*No remedy has yet been discovered which appears to exert any specific influence upon tubercles, either in preventing their development, or in promoting their cure*" (p. 309). If they can neither be prevented from *developing* themselves, nor their *cure* be promoted by medicines given by the stomach, why should the patient continue to take medicines? This shows us why Dr. Swett advises his professional brethren to give "*as little medicine as possible, and this only to combat troublesome symptoms.*"

No; if you have consumption, even in the first stage, medicines given by the stomach, no matter by whom they may be prescribed, will not prevent your disease

from progressing; opiates and tonics may mask, but they do not even retard it. Who can wonder that so few cases of consumption recover, when such precepts as those I have unfolded guide the practice of medical men? When the system is strong and vigorous, and all the functions of the body—the stomach, the liver, the kidneys, &c.—are healthily performed, everything is favorable for the *cure* of a disease of the lungs. This is the case in the first stage of consumption. Besides this, the tubercles themselves, in this stage, are small, the obstruction they occasion to respiration trifling, and any disorganization they may have produced in the delicate tissue of the lungs, limited in extent. Under such circumstances, if medicines are ever to effect its cure, they can be prescribed with the best chance of success. Now it is precisely in this stage that we are counselled to do nothing; or, if we give any medicine, it must *not* be to aid nature in expelling the tubercles, but something simply to palliate *pain* or moderate *cough*. We are to shut our eyes and allow the *miliary granulations* to pass on to *crude tubercles*, and from crude tubercles to *ulceration of the lungs*, or, in other words, from the first to the last stage of consumption; and all that is to be done is, to *allay local irritation* by opium, *diarrhœa* by astringents, and *night-sweats* by mineral acids, and finally to solace the close of life by attending to the “immediate comforts of the patient.” The “*close of life*” is a very natural termination of such a course, and indeed is the only one which any physician could reasonably expect to result.

Then let the sick understand that consumption is not curable by any method of treatment hitherto employed. That the pretended “*Iron mixtures*,” “*Iodine syrups*,”

"*Alteratives*," "*Counter-irritation*," and the like, are only so many palliatives which may sometimes *relieve*, but have no power to cure.

So ignorant are the people of the merits of the different plans of treatment, that many who now hear these facts would yesterday have stoutly argued in favor of the old treatment, not knowing that the advocates and teachers of it freely confess its worthlessness. No man in medical matters, any more than in religion or politics, can blindly sit down under the guidance of this or that sect or school of physicians with safety if the object desired is the *recovery* of his health. If he is satisfied by *palliation* it matters very little what physician he employs, or what system he adopts. But, if his object be *cure*, he must seek it not from a practice, the ablest advocates of which admit it to be incapable of effecting cure, but in some new and improved method of medication, which promises at least a chance of life. However little faith he may have in any plan of treatment, I believe it to be his duty to try everything which seems reasonable to his understanding, rather than sit down in despair, and die a victim of his own prejudices against probably the very means that would have saved him.

I have entered more fully into the consideration of the usual practice of the profession, because I know it to be but little understood by the people. Many are led to believe that, by continuing to take certain medicines prescribed for them by their physicians, they have a fair probability of recovery. The very nature of the disease creates this hope, and, I am grieved to have to add, the uncandid assurance of my medical brethren in many instances strengthens and sustains it. And

yet, in reality, such *hope* and such *assurances* are in direct variance with the *teachings* of the books, the *confessions* of the profession, and the *experience* of the world.

THE HOMŒOPATHIC TREATMENT.

Will homœopathy cure consumption? I think not. There is, however, always a difficulty in satisfactorily discussing a question of this character with reference to homœopathy. There is nothing in the writings of either Hannemann or Jahr, the great champions of this sect, which enables us to judge of their opinions on the subjects. Their works are eminently non-committal.

But fortunately we can always appeal from *theory* to *experience*, and this after all is the true test of the merits of a practice. What does experience teach us with respect to homœopathy? It teaches us that, as a class of practitioners, they enjoy no reputation for success in the treatment of consumption. I believe they make no claim to be able to cure this disease by homœopathic prescriptions. I know that many of the more candid, frankly confess that it is beyond their control. We have evidence of this in the following confession of Drs. Hartmann and Hempel, two of the most learned and candid homœopathic writers on this disease :—

“Even with us homœopathic physicians who imagine that a disease with a variety of symptoms is more easily cured than one deficient in symptoms, the treatment of phthisis is just as uncertain as with allopathic physicians. But we must *do for the best*, and therefore shall at once proceed to describe the treatment.”

But we are not limited to these proofs of the inefficiency of homœopathy in consumption. A fact of far more significance than any mere assertion is seen in the circumstance, that at this very moment several prominent practitioners of this school are actually practising inhalation! Lest the fact of this experiment with inhalation should be questioned by some of the friends of homœopathy, I will make a few quotations from an article in the Homœopathic Journal, "*On the Inhalation of Medicated Vapor in Bronchial and Lung Diseases,*" by one of the editors. This writer tells the readers of the journal that consumptive maladies "have always been considered the *opprobrium medicorum*, and the statistics of each and every kind of medical treatment which has ever been adopted (including homœopathy), been sad evidence of man's utter ignorance of their true specific remedies." He next proceeds to tell them that the treatment of these diseases by inhalation seems to be effecting much good. "*It has proved,*" says he, "*quite a relief, and in many instances we may hope, a permanent cure; and the theory of inhalation, as a remedial measure, is so consonant with reason and common sense, that we need spend no time in arguing its merits*" (p. 39). He is delighted with inhalation, because its principle "*lies at the foundation of the homœopathic Therapeia*" (p. 40). "*Availing myself of the apparatus and the method of inhaling, I immediately commenced using the same medicines I was prescribing internally for my patients, volatilizing them for use by mixing them with alcohol and syrup*" (p. 43).

The Doctor cannot understand why, if inhalation is successful in the hands of those who understand it, it may not be so in the hands of homœopaths. He there-

fore urges upon his brother practitioners the importance of striving *to discover* the proper medicines :

“Where the diseases are of so grave and generally fatal a character, it is worth persevering care and trial with every member of a profession whose office and dignity it is to relieve; and, where it is possible, to cure disease” (p. 50).

He is also “happy to learn that the treatment by inhalation is being tried by many of our members in different sections of the country” (p. 50), and closes his article by a very suggestive inquiry :

“Why may not some remedy *be yet discovered*, which, inhaled into the lungs, shall prove the exact specific in phthisis, and enable us to control that most insidious and most surely fatal scourge of the human race?” (p. 51.)

In these remarks I am not animated by any spirit of special hostility to homœopathic practitioners. I do not believe in their dogmas, but I leave them to the exercise of their own judgment. I have, heretofore, intentionally avoided all mention of their doctrines and practices in my published writings; not because I believed the former to be sound, or the latter free from censure, but because I had a more important work to accomplish. I have devoted my life and mental energies to improve the treatment of pulmonary diseases, by establishing the success of direct medication, and I only refer to them now in so far as the doctrines and practice of this school bear upon my argument.

THE WATER-CURE TREATMENT.

It is scarcely necessary to dwell on the water-cure treatment of consumption. There cannot, in reality, be

said to be any such treatment. The most enthusiastic admirers and advocates of "wet-sheets" and "*cold douches*" shrink from the responsibility of their application in consumptive cases. Priesnitz, the father of "*Hydrotherapy*," used to frankly tell all consumptives who applied to him for treatment, that "no means could ever cure them." As Priesnitz was not a physician, it may justly be questioned whether he was competent to express an opinion so positively; but so far as it relates to this particular practice it entirely accords with the subsequent experience of every candid physician connected with water-cure establishments. The practitioners of this sect, regarding the disease as entirely incurable by every means, very naturally claim to be able to do as much for consumptive patients as any other class of physicians. They profess to be able to *palliate* the symptoms and to improve the constitution in those who are threatened with the disease, or predisposed to it by inherited feebleness. "In short," says Dr. Edward Johnson, one of the great lights of *Hydrotherapy*, "since we *cannot cure* consumption, can we cure the consumptive constitution, and so prevent that which we cannot cure?" (p. 320.) This *he* believes possible, but I very much doubt. I have seen a good deal of this practice in consumption, and in no single instance has it appeared to exert any beneficial influence, even in the early stage, when everything was favorable for testing its merits. I have seen incipient tubercles hastened in their progress. I have seen congestion of the lungs and fatal hemorrhage induced by the injudicious application of water, in persons of feeble reactive power. And when I look for any good results, they are nowhere to be found. The application of cold water to the surface of the body is

always a dangerous experiment in consumption. What effect does it produce? It drives the blood from the surface of the body to the deep-seated organs, thereby *gorging* or *congesting* them. Even admitting what is by no means certain to take place, that the cold application is followed by a complete *reaction*, is not the temporary congestion produced always hurtful? But suppose, and this is no imaginary case, that perfect reaction does not follow the bath, what then? Why, a week or a fortnight will be lost in striving to overcome the mischief done. It is this danger of producing congestion of the lungs which renders *cold* baths, affusions, and the like, inapplicable to pulmonary cases, and particularly to those of a tubercular character, whether the tubercles are actually deposited, or there be only a predisposition to their deposition. *Warm* baths and affusions are not open to the same objection, but they are debilitating, and cannot be said to be, in any respect, beneficial. It may be well to observe, however, that when *congestion* has been produced by the cold bath, a hot bath is the best means of overcoming it. The best and, indeed, the only safe use that can be made of water in consumption, is that of daily sponging the body with tepid water, i. e. water at such a temperature as shall produce no sense of chilliness; and this can as well be made at the patient's home as at a water-cure establishment. The object sought to be accomplished by its use is *cleanliness*, and the removal of the *perspired* impurities from the surface of the body. It has no other efficacy in this disease.

Dr. James M. Gully of the famous Water Cure Establishment at Malvern, England, author of a work entitled "Water Cure in Chronic Diseases," and decidedly the most reliable authority on the subject, thus

speaks of Consumption: "*I am not about to say that in the Water Cure the means exist of curing either incipient or confirmed Consumption; such means exist in no plan of treatment hitherto advanced*" (p. 148).

If it will not cure "*incipient Consumption*"—that is the disease in its commencing stage—it is scarcely necessary to say that it will do no good in the confirmed stage when all the powers of the system are beginning to give way. Dr. Gully further tells us that he regards Consumption as "altogether incurable by water, physic, or any other known treatment." Neither can the inflamed tubercle be removed nor the ulcerated cavity it has left healed. The poisoned arrow sticks to the wounded side—and is not to be withdrawn by human art.

Consumption reaps one third the adult population of this country. Its wan and haggard victims stare us in the face at every turn—and yet nothing is to be done to stay its desolating career. Did the same mortality occur among our horses—aye, even among the lowest and least prized of domestic brutes, we should see a profound interest aroused, and inquiry running from point to point in search of the latest and best means for arresting so great an evil. And shall we bestow *less* solicitude on our friends and relations? Shall we manifest less concern for the lives of those who are bound to us by the nearest and dearest of earthly ties? Our brothers and sisters, our wives and children. If not? then must we abandon the old methods of treatment, for it is vain to hope for the discovery of *truth* by following in the footsteps of *error*. A fountain can rise no higher than its source—and in this instance, its source is in the valley of despair.

When viewed as a whole, the profession may be likened to the face of a wild country—here a spot of verdure and there a barren waste. On one hand a proud and noble mountain rearing its head towards the heavens; on the other hand, dark ravines which lead down to pitfalls and quagmires. And like the face of nature, the richest treasures lie concealed beneath the most barren and unproductive soil. It requires careful research and indefatigable perseverance to find them out, but once discovered they yield an ample reward. Medicine has been built up by very slow degrees to its present state. At every period of its progress it has been led into a blind warfare against its own interests. Many of its most cherished principles were long scouted as false, and what is deeply to be deplored, many of its practitioners in the present day do not appear to have learned wisdom by experience. We cannot, surely, regard medicine as having reached its highest perfection while there are so many diseases which bid defiance to our skill. The book of medicine is the book of experience, and it would indeed be vanity in us to assume that the experience of the future will not be as productive as that of the past has been, and the present promises. And if it be admitted that the art of healing the sick is susceptible of improvement, we must anticipate that discoveries will be made from time to time, and the effect of such discoveries can only be to uproot existing errors, or to fill up blanks which as yet have not been occupied. Those who are able to contribute anything to improve the profession should, therefore, be regarded not as objects of suspicion and jealousy, but as zealous laborers, worthy of all praise and honor. When we have acquired all that has been learned in the past, and have added thereto

the discoveries of the present century, we shall still be able to say with La Place, "that which we know is little, that which we know not is immense;" and with Sir Isaac Newton, in the flush of his immortal discovery, "I am but as a child, standing upon the vast undiscovered ocean, and playing with a little pebble which the waters have washed to my feet."

LECTURE II.

ON THE TREATMENT OF CONSUMPTION.

As the allusions to the practice of the profession in my last lecture seem to have been in some degree misunderstood, I think it right to premise my lecture this evening, by a few general observations, which I trust will be so plain, that none shall be able to misunderstand them.

I regard the fundamental basis of medicine as identical with man's structure, and the known laws and materials of nature. The one cannot change unless the other changes also. The true investigator of medical science never loses sight of this bold landmark. There can be no new medical science, for science is what inevitably exists in the nature of things. But the *art of medicine*, in adapting this science to the practical purposes of life, assumes a thousand forms and phases, according to the peculiar requirements of each case.

Since the time of Hippocrates, who flourished 432 years before Christ, the healing of the sick has been recognised as an art, and its practitioners enrolled among the honorable professions. The principles laid down by this profound medical philosopher, and his simple and accurate descriptions of disease, have, in all succeeding ages, been received as the *primitive* basis of medicine. The followers of Hippocrates may justly be styled the legitimate profession. They have transmitted the principles and precepts of his practice, from generation to generation, and thus brought them down to our times. They have corrected many of the errors into which the

founder of Physic was led, and have added innumerable discoveries to every branch of the healing art. By their ANATOMICAL investigations they have unravelled the mysterious structure of the human body. By their PHYSIOLOGICAL researches they have traced out the functions and uses of the several organs. By their PATHOLOGICAL examinations they have laid bare the seat and true nature of many intricate maladies, and thus led to a more successful treatment. By their experiments in organic and inorganic CHEMISTRY, the components of the several fluids of the body, in health and disease, have been determined, and the bowels of the earth compelled to yield up its hidden remedies to the relief of our infirmities. By their study of BOTANY the medicinal properties and uses of plants and herbs have been determined, and recorded in ponderous works on *Materia Medica*. And not only this, but the influence of CLIMATES and SEASONS, of DIET and CLOTHING, of EXERCISE and HABITS OF LIFE, on human health, has been pointed out for the guidance of mankind. Whatever, then, there is in the *healing art* which partakes of the dignity of *true science*, belongs of right to what is popularly styled the *allopathic* profession. It is to their labors and their experience that physicians of the present day owe whatever knowledge we possess of the digestion and assimilation of nutriment—of the circulation of the blood—of the source of sensation, and the power of voluntary motion—of the symptoms and nature of diseases, and of the remedies which are in our possession for their cure. As the anatomy and the physiology of the body cannot change, nor the nature of disease, nor the properties of medicine, it follows that there can be but one true profession based upon them.

Medicine, then, as a SCIENCE, consists in the knowing of what exists; and this knowledge, in the highest degree of attainment yet reached, has ever been in the hands of the allopathic profession.

But medicine, as an ART, consists in the application of principles deduced from science to the cure of disease, and may be either true or false. The principles may be false, or, being correct, may be so warped from the legitimate teachings of science, through the ignorance or conceit of the physician, as to be productive of injury rather than good. Hence it is that there may exist many errors and false practices, which mar the perfection of the art of medicine, while there cannot exist any which affect the *science* upon which it rests.

From this it will be understood that I regard all sects which have sprung from the regular profession, and which affect to reconstruct medicine from its foundation, as false and mischievous. Medicine can be *improved* in its practice in regard to particular diseases, new medicines may be discovered, and new compounds and applications of old remedies, which will increase medical skill, but it cannot be RECONSTRUCTED. It is only in the *treatment* of diseases that any considerable change can be made, and even here such change will be limited to those diseases which are not curable by the usual remedies or modes of their application.

The splitting up of the profession into sects has ever been its bane and curse. It has divided and diverted research. It has obscured many sacred truths, and bred up a thousand vulgar errors. It has encouraged the growth of idle theories for novelty's sake. It has fostered quackery. In a word, the proofs it has given of weakness and contention in the ranks of the profession

have lowered the dignity of the healing art, and shut out from its practitioners much of the esteem and confidence which would otherwise have been extended to them.

Medical *sects* have generally been founded by wild theorists, who had more ability than honesty, and more honesty than regard for the welfare of science and humanity. While no art can claim equality with the medical in the humanity of its purpose, or the self-sacrifice of its members in their attendance upon the sick, it must be admitted that none has exhibited a spirit of such rancorous and suicidal opposition to the introduction of new doctrines. With scarce an exception, discoveries and proposed improvements in medical practice have not only been for a time denied without an investigation, but the character and reputation of the discoverer have been violently assailed.

Few of the great discoveries which have been made in medicine have brought their authors either honor or advantage during their lives. After death, when interest no longer clashed with truth, their names were enrolled in college, their busts placed in the niche of fame, and an annual oration pronounced in honor of their memory!

This spirit has fostered disunion and the division of the profession into sects. Unjust opposition of one truth has led to the establishment of the whole system of error upon it. "*Homœopathy*," "*Water-Cure*," and "*Thompsonianism*" have thus sprung into being, and though as systems of medicine they are unquestionably false, none can deny that with much error there is mingled a little truth. Whatever is true in each belongs to the regular practice, for it has sprung from the scientific basis of the profession, and whatever is false belongs not to medicine at all but to quackery.

But however misjudged or ungenerous may be the opposition of the profession, the true and honest contributor to the stock of medical knowledge will not seek to bring *dishonor* upon his art. In striving to reform error in the profession it is not necessary to found a new sect. Had I chosen to do so, the practice I have introduced for the cure of pulmonary diseases afforded an inviting opportunity. But I had *higher* and I trust *nobler* aims than self-exaltation at the expense of humanity, and the sacred principles of science. I have sought to *improve* medicine, not to *degrade* it.

THE ARGUMENT ON INHALATION.

As the treatment of consumption and kindred diseases of the lungs, by direct medication, was first brought prominently to the notice of the public and profession of the United States by myself, an explanation of this mode of practice, will, very naturally, be expected from me. There is, perhaps, no remedial means about which the mass even of educated physicians know so little, or entertain such vague and erroneous impressions, as they do in regard to the action and efficacy of inhaled medicines.

The basis upon which this mode of practice rests, may be explained in a few words. The air we breathe is more immediately concerned in the production of disease than any other influence to which we are exposed. It is subject to changes in its *temperature*—in its *density*—in its *electrical condition*—and in the amount of *impurities* which it contains—all of which changes directly affect our feelings and our health. It impresses locally on the internal surface of the lungs, the influence of every

change in its temperature and condition. Through the lungs it acts on the blood, and through the blood on every organ, and muscle, and nerve, and tissue of the body.

Either in some radical change in the air itself, or in the poisonous gases, vapors, and particles of which it is the carrier, lie the causes of "*continued fever*," "*the plague*," "*yellow fever*," "*cholera*," "*ague*," "*influenza*," and many other maladies. Through the same medium the virus of "*small-pox*," "*scarlet fever*," and other common eruptive diseases, is spread from house to house, and from town to town, until it has traversed the globe. "*Spasmodic asthma*" has unquestionably an atmospheric origin, and "*whooping cough*" we know to be transmitted from one child to another by the breath.

Now in these diseases, the cause is INHALED into the lungs, and thence *taken up* by the blood, which is thus vitiated, and the circulation of which carries the poison from organ to organ, depressing their vitality, and deranging their functions, until a chain of morbid disturbance is established which involves the entire body. This is the true source of all so-called idiopathic diseases.

There are other affections which spring directly from the action of the air on the mucous membrane lining the air passages. Of such are *catarrh*, *quinsy*, *laryngitis*, *croup*, *bronchitis*, and *pneumonia*.

Consumption in the adult, as you were told by my colleague, arises from a vitiated state of the *blood*, produced either by the respiration of *impure* air, or caused by *local obstructions*, as from *catarrh* or *bronchitis*, which interfere with its proper oxygenation.

Again, the state of the air influences powerfully the nervous system. Of this we have almost daily proof in

the change in our *spirits*, and *feelings*, produced by the state of the weather. The despondency arising from this impression on the nervous system, gave rise to the old saying, "*this weather is suicidal*;" and there can be no doubt, that, in many instances, the depression amounts to a disregard of life. Sir James Johnson tells us that the sirocco, a blighting hot wind which prevails in Italy during the month of April, induces in travellers a suicidal tendency extremely difficult to restrain. I note these facts as evidence of the action of the air (possibly from a change in its electrical state) on the nervous system, but the probability is, that the influence is compound, and acts both on the blood and on the nerves.

I might mention other influences of the air, and its impurities, on our health, of a purely mechanical character, as the inhalation of the dust of workshops, which frets, irritates, and finally causes ulceration of the delicate lining of the air tubes, giving rise to destructive disease; but my aim is merely to draw attention to the fact that *the most prevalent and fatal diseases enter the system through the lungs*.

The knowledge of these facts, the strong indications of nature, the rationality of acting on the system through the same channel by which the cause of disease gains entrance, the ease with which we can *medicate the blood* through the lungs, and the unquestionable importance of acting directly on the *seat* of the disease in all pulmonary affections, led me to turn my attention early in my professional life to a field of such vast and inviting inquiry—to seek for a remedy sufficiently potent to stay the ravages of pulmonary consumption. I was encouraged to believe, from the hopelessness of the disease, and the acknowledged inefficiency of every well known and customary treat-

ment, that the cause of failure was to be found in the roundabout and unnatural manner in which medicines had been administered, rather than in the nature of the disease itself, or the inefficiency of medicines employed. I observed that consumption manifests itself *first* in the lungs, and is induced, in the great majority of cases, by some cause which directly interferes with their function; that the oxygen of the air received by the lungs is the element of assimilation, and regulates the exact amount of nutriment which can be built up into the body. I knew that the digestion of food might be perfect in the stomach, and yet that the nutriment so prepared could not nourish the body without the lungs supplied the means of its appropriation. It was evident to me that the disease, by obstructing the air tubes and destroying the air cells, seriously diminished the quantity of air received, whilst in a corresponding degree the body shrank from defective nutrition, and kept pace in its wasting with the encroachments made by the disease on the *capacity* of the lungs. And from these facts I became convinced that if ever a successful treatment for consumption was found, it would be, not by striving to act on the lungs *through-the stomach*, but in a persevering effort to restore their function, and the purity of the blood, by following the course of nature and attacking the disease *in* the lungs and *through* the lungs—the channel by which it had gained access to the system.

The train of reasoning which led me to the adoption of a system of direct medication seems also to have gradually taken possession of the professional mind—and especially of the minds of those physicians who had distinguished themselves by careful researches into the cause and nature of Tubercular Disease.

“Look,” says Magendie, “at pulmonary phthisis for example; there is an affection which you see, day after day, cutting off individuals of every age, of every sex, and of every rank, yet none has been more carefully studied on the old plan, none has proved a more fruitful source of dogma and disquisition. Eminent observers have described all its phenomena even to the minutest details. But what is all this but description, but so much natural history! Will it throw any light on the treatment of the affection? Not a particle! but we hope for enlightenment in this respect. We must learn the *cause* of the disease, nor need we despair of discovering it. Perhaps tubercular matter may yet be detected in the blood, and, as a further step, the means of destroying or preventing its formation ascertained.”—*Magendie's Lectures on the Blood*, p. 13.

Professor Carswell, the distinguished Pathologist, observes on the same subject, “it may not be too much to hope that by means of a more intimate knowledge of organic chemistry, we may yet be able to detect in the mucous secretions, or in the blood, those changes which indicate the existence of the tuberculous diathesis, and thus perhaps be led to discover a remedy for the disease before it has effected its localization and produced changes in themselves incurable.” (*Cyclo. Med.*) The HOPE that such a remedy might YET be discovered appears to have been generally entertained, for though Dr. Chapman, of Philadelphia, a few years ago, proclaimed the idea of curing consumption by any remedy then known—“*a delusion*”—even HE did not think it either *impossible* or *improbable* that some improved method of treatment would, in time, be found out.

It would seem, too, that, of late years, as our know-

ledge of the essential nature of tubercular deposits became improved, many distinguished physicians almost simultaneously turned their attention to the lungs and to the consideration of the feasibility of reaching the malady more successfully through this channel. Notwithstanding the failure of some experiments instituted by himself to test the merits of chlorine gas as an inhalant, Sir John Forbes tells us in an article on asthma that "*reason, analogy, and experience, unite to justify the inhalation practice.*" And Professor Carpenter, of the University of London, the distinguished Physiologist, still more strongly urges it upon the profession. Having demonstrated that "*the absorption of volatile matters diffused through the air is continually taking place by the lungs,*" (p. 534,) he observes:—"It cannot be doubted that miasmata and other morbid agents diffused through the atmosphere are MORE READILY introduced into the system through the pulmonary surface than by any other; and our aim should therefore be directed to the *discovery* of some *counteracting agents*, which can be introduced in the same manner. The pulmonary surface affords a most advantageous channel for the introduction of certain medicines that can be raised in vapor when it is desired to affect the system with them *speedily and powerfully.*"—*Physiology*, p. 535.

These extracts sufficiently show the tendency of the professional mind towards the truth, in the recognition of the local and constitutional potency of inhaled remedies, which forms the very basis of our system of practice. It is well known that I have contended for years that the great cause of the want of success which has followed every treatment in consumption, and attended equally every class of physicians, is not that the

disease is *incurable* or the medicines *inefficient*, but that the former has not been understood, and the latter most injudiciously applied. The idea that consumption is merely the local manifestation of an *inherited* or *acquired* constitutional disease has been productive of incalculable mischief. This theory received a terrible blow from the investigations of Louis, and the accumulating facts of each day are fast establishing in the minds of the profession its utter fallacy.

The tables of Walshe and Louis show us that but a small proportion of the cases of actual consumption directly spring from consumptive parents. They further prove the disease to be generally acquired under the operation of certain deleterious influences, among the chief of which they place *impure air*.

Supposing, then, consumption to be the result of an *acquired* constitutional taint, the question arises how that taint is produced. No *constitutional* malady can spring from a healthy action of the several organs of the body. There must be a defect somewhere. Either what is *taken into* the body by the lungs and the stomach must contain the poison, or it must arise from the *non-casting out* of impurities which should be expelled. Some organ must, therefore, fail in its function, and the question to be determined is, which is that organ? Is it the stomach? Some physicians have taught this doctrine, but in every instance, I believe them to have been mere theorists; certainly, they could not have studied the disease practically. If the stomach fails to transform the food into good healthy nutriment, the blood may become *poor and watery*, and the body may *emaciate*, but it will not become *tuberculous*. Tubercles will not arise from mere deficiency of nourishment,

however long protracted. Dyspeptics are undoubtedly more liable to consumption than persons of stronger digestion, not because they are dyspeptics, but from the body being so much enfeebled as not to be able to resist the cause of the disease. Any other debilitating disease is equally predisposing. If the *stomach* were the cause of true consumption, how does it happen that the disease never effects its localization there? But this theory is shown to be a palpable absurdity, by the fact that *two* out of every *three* persons suffering from this disease have no derangement of the stomach until long after the lungs have become seriously affected, and *many* not until the last few weeks of life.

Theory then may say that consumption is a disease of the whole body, but *practice* teaches us that it can only be cured by regarding it as a local malady, and attacking it in the lungs. If bad food and bad digestion will vitiate the blood, will not bad air and defective respiration do so in a tenfold greater degree? Then why suppose the lesser cause, and overlook the greater? Is the function of the lungs less necessary to life than that of the stomach? We can go for days without food, and yet sustain no material injury; but we cannot suspend the purification of the blood by respiration for more than a few minutes without causing death. And when, too, it is considered that the lungs are always the seat of the disease after it has become localized, the only logical inference to be drawn, in the absence of positive demonstration, is that the deposition of tubercles is always preceded by some impediment to the function of the lungs. A slight catarrh—chronic bronchitis—a seated cold—a dusty work shop, sedentary employment in a close atmosphere, these are the influences which obstruct

the function of the lungs; and they are precisely the influences under which consumption will be produced in any lung, no matter how strong or free from family predisposition may be the constitution of the individual. The many causes which tend to induce pulmonary irritation, and fill the air tubes with viscid phlegm and mucus, in a climate so changeable as this, explain at once the melancholy frequency of consumption, and point out the lungs as the *alpha and omega*, the beginning and the end. It is here that disease first manifests itself. As before remarked, the general health is often entirely undisturbed—the appetite and digestion good—the bowels regular—the skin natural in temperature and moisture, and so of the other organs. A little *hacking* or *hawking* of sticky phlegm—slight *loss of flesh*, and commonly a sense of greater *shortness of breath than natural on ascending stairs*, with a disposition to sigh frequently—these are all the symptoms we have in *incipient* consumption. Even these symptoms are not always present, until some time after the *stethoscope* has revealed the existence of tubercles in the lungs. I say, therefore, that the disease is essentially confined to the lungs, and all the danger to the patient arises from its progress in this organ. It has been the great error of the profession to overlook this fact, and as a consequence, to treat merely the *symptoms*, leaving the *cause* undisturbed. Physicians have labored to clarify the muddy streams, instead of striving to purify the fountain which corrupts them.

But many say, "*the whole system is involved in the disease.*" Yes, the whole system sympathizes with the disease in the lungs, just as it does with any other local affection, from a splinter in the finger to the break-

ing of a limb—from irritation in a little nerve in the root of a tooth to ulceration in the delicate structure of a vital organ. Who has not seen a thorn in the finger produce fever, increase the pulse, and destroy the appetite? And whoever has seen this, has seen the brain, the heart, and the stomach, three of the most vital organs, disturbed by a little irritation in the end of the finger. A scratch has been known to produce lock-jaw and death. Every surgeon knows the wide range of sympathies which ever attend wounds and injuries. The *brain* suffers in a very marked degree, the *stomach* loses its tone, the action of the *heart* becomes fitful and irregular. When the *secondary fever* sets in, the *skin* is hot, the *face* flushed, the *pulse* increased in frequency, the *appetite* poor, and the *tongue* furred. And if all these sympathies may come from a trifling local injury, in an unimportant part, surely we ought to feel no surprise that tubercles, festering and ulcerating so vital an organ as the lungs, should set up a chain of morbid sympathies involving the entire body. Some point to the *hectic fever* and *night perspirations* as a proof that the constitution is involved. But every physician must know that these symptoms are often produced in a very marked degree by a simple abscess or collection of matter in the leg or in the groin. I have known hectic follow an abscess produced by a stab from a dirk in the thigh. If so purely local a cause as this is sufficient to produce it, none can deny that *suppuration* in the lungs is a cause far more likely to do so.

I have dwelt on these points longer than was perhaps necessary, but the absurd idea, that consumption is in its commencement a constitutional disease, has existed too long for the credit of the profession or the good of

the sick. Rely upon it, no physician who bases his treatment on such a doctrine will ever effect its cure. The very symptoms from which consumptive people suffer all point to the lungs. The "*cough*" is caused by irritation, induced by the presence of *phlegm*, *mucus*, or *pus* in the air passages. The "*expectoration*" comes from the inflamed mucous membrane lining the bronchial tubes, and, in the last stage, from ulceration and softened tubercles. The "*shortness of breath*" is produced by the filling up of the air cells and tubes by *tubercles* or *sputa*. The "*pain or soreness*" comes, in part, from the inflamed state of the diseased lung, but also, and chiefly, from the extension of irritation in the *pleura*. The "*hectic*" from suppuration, or from nervous irritation, or both combined. The "*hemorrhage*" or "*spitting of blood*" from the obstruction of the pulmonary vessels of the diseased lung. The "*loss of flesh*" from the defective vitalization of the blood and chyle in the lungs. There is not, in fact, ONE characteristic symptom of consumption which does not arise from this local disease of the lungs; and yet medical men continue to cite those very symptoms as proofs of its constitutionality.

If we needed any additional proof of the local origin and nature of consumption, we might find it in the manner in which all physicians determine on the chances of recovery, in each individual case. The first step is to examine the lungs with the stethoscope and by percussion, and if they find them free from tubercles they assure the patient that he is in no danger, even "*though he may have spit blood, expectorated pus, and lost flesh.*" I quote the very language used at a recent examination by a physician in respectable position in this city. That it is unsound and unsafe doctrine we know, but what does

it say for the consistency of the same physician who holds the old dogma, that the symptoms of consumption are only the local manifestation of a constitutional disease? If these are the signs of an *incurable* constitutional taint, they should be regarded as just as perilous to the patient, whether his lungs were diseased or not. Again, every physician decides whether a patient can recover, not by the *severity* of his cough, for many hopeless consumptives cough very little; not by the *quantity* of the expectoration, for in many cases of *curable* bronchitis the expectoration is much greater than in any case of consumption, however incurable; not by the *intensity* of the pain, for many consumptives never suffer from pain; no, nor, indeed, from any of these symptoms, but solely from the *pulmonary* disorganization. He "*sounds*" the chest to discover how much of the lung is *affected*, or in what stage. If the disease is confined to a small part, the case is *curable*; if it involves a large part the case is hopeless.

The test, then, is a *local* test; the symptoms are local, and the cause is local. Such being the case, what should the treatment be? What aim has the physician in view? Is it not to stay the progress of disorganization in the lungs while there yet remains sufficient breathing surface to sustain life? Clearly this is or ought to be the chief object of all his efforts. Now, how does he do this by the old practice? If he is an allopathic physician he strives to soothe the cough, to palliate the pain, and to improve the appetite. Nothing more is ever attempted. In other words, he rests satisfied with having relieved the more urgent symptoms. His aim is to make the patient comfortable, not to cure him! The disease of the lungs goes on unchecked, until even opiates fail to relieve and

tonics to strengthen, when the poor sufferer dies a melancholy object of misery and despair? Homœopathy and the Water cure scarcely deserve mentioning, since all experience is against them—and the confessions of their own advocates not in their favor. Homœopathy perhaps affords as much relief and does less injury than Allopathy: but the Water cure may be said to do more injury and afford less relief than either.

Believing then consumption to be a disease *sui generis*, originating in obstructed respiration, having its seat in the lungs, and endangering life, just in proportion to the extent of its ravages in this organ, both reason and analogy point us to its direct treatment by inhalation, as the only means by which cure can possibly be effected. This is a logical inference from the foregoing facts, and may be said to carry its truth upon its face. If we would cure consumption we must treat the *disease*, not the *symptoms*; and if we would treat the disease we must *inhale*, for there is no other means of reaching its seat. No treatment by the stomach can be more than *palliation*, while by the lungs it is always *radical*—it gets at the very *root* of the disease.

Let me now explain what is meant by inhalation, for on this point there is much ignorance, and I am constrained to believe, some prejudice; the reason for which latter is not, I doubt, very clear to the minds of those who entertain it. Still, let me see if I cannot remove both the ignorance and prejudice at the same time. Everybody claims to have a natural right to give medical advice to their friends: if so, it is always desirable that such advice when given should be *correct*.

EXPLANATION OF INHALATION.

By inhalation, we mean not a particular *remedy*, but a particular *method of practice* consisting of many remedies. That is to say, the medicines inhaled for the cure of consumption are not alike in all cases, nor even in all stages of the same case. Inhaled medicines are adapted to the condition of the lungs, in the same manner that we adapt those given by the stomach, to the object to be accomplished by their use. We may *swallow a purgative*, an *emetic*, or an *opiate*, and though all are taken in the same manner, and pass into the same organ, yet each produces a different effect. So is it with inhaled medicines. We prescribe one inhalation to *soothe* the lungs, another to *expectorate the lungs*, a third to *stimulate* the lungs, a fourth to *promote absorption of tubercle*, a fifth to *astringe the mucous membrane*, a sixth to *allay spasm in the air passages*, a seventh to *decarbonize the blood*: and of each of these kinds many different forms are made by increasing or diminishing the proportions of the ingredients of which they are composed, or by the substitution of other ingredients of the same class. Inhalation, then, as a practice, is a complicated system. Its principles are *simple*, but its practical adaptation to the cure of disease, of necessity most *intricate*.

This is not what has been heretofore, and is to a considerable extent still supposed by the public. One regards it as a particular *medicine*, applicable to all cases; another as several specific medicines, each adapted to the cure of a particular kind of pulmonary disease. Not a few are led to believe that if they use inhalation, all other means must be at once laid aside. Now all this is very foolish and very wrong, yet I know that these ideas

are held by a large proportion of the people. Inhalation is only the means of healing the lungs by causing the absorption of the tubercles. Whatever is necessary to impart tone to the stomach, or to regulate the system in any other respect, is prescribed just as though no inhalations were employed. Equally true is this of diet, change of air, and exercise. The only aim is to accomplish by inhalation what cannot be accomplished by any other means, viz., to stimulate the diseased surfaces to heal, and to impregnate the blood with medicines which counteract the carbonaceous poison, and prevent growth of tubercles.

METHODS OF INHALATION.

There are three principal methods of employing medicated inhalations. The *first* is by an inhaling instrument; the *second*, by diffusing the vapor through the sleeping-room of the patient; and the *third*, by an airtight vapor chamber.

(a) THE INHALER.—This is a glass instrument, holding a little more than a pint of water and fitted with glass and india-rubber tubes, a metallic cap, and a glass mouth-piece. When used it is half filled with *tepid*, *warm*, or *hot* water, as the case may require; the medicines are then added, and the tubes placed in position. On inhaling, the *air* is carried down through the medicated liquid, and thoroughly impregnated, in which condition it passes into the lungs. This instrument is generally used *three* times a day—sometimes *four*. At each time of use it requires to be charged afresh. The time of inhaling is ordinarily fifteen minutes, but where the patient is very feeble, five or ten minutes will be suffi-

cient, in which case the inhaler may be used four or five times in the course of the day.

The size, form, and materials of the inhaler are matters of more consequence than is generally supposed. The following are the requirements of an instrument properly adapted for the administration of medicines in a state of vapor.

1st. The *materials* of which it is composed must be such as are not liable to be acted upon by the medicines employed, and such as will not absorb any of their properties. Glass and india rubber are the only substances which meet these requirements.

2nd. The *size* of the inhaler is important, since it regulates the quantity of the fluid. I have found a vessel capable of containing about a pint of water best adapted. Half a pint of water will retain sufficient heat to volatilize most medicines, and this gives half the capacity of the globe for the agitation of the liquid. If we double the size of the inhaler and the quantity of the liquid, we *increase* the labor of inhaling, and in the same ratio *diminish* the benefit derived from it. We make what should be a healthy and beneficial exercise a fatigue to the lungs.

3rd. The *shape* of the inhaler is equally important. If you take a narrow bottle and put into it half a pint of water, adapting tubes in the same manner as for the inhaler, and carry them down to within the same distance of the bottom, you will find that the effort necessary to inhale is much greater than it is when the same water is placed in a shallow vessel. By making the inhaling globe broad and flat, we diminish the depth of the fluid and consequently the effort necessary to force the air through it.

4th. The *tubes* are not less important. A small tube will not admit sufficient air through it, in the period of an ordinary inspiration, for the requirement of the lungs. The tubes of the inhaler, then, must be as large as the air passage through the human larynx, or the act of inhaling will be constantly interrupted by efforts to fill the lungs with air. All the inhalers I have seen have had this defect, and it cannot fail to prove an insuperable obstacle to their continued use. Many of those I see in Druggists' windows could not be used even by a person in health without fatiguing the lungs.

5th. And lastly the tube which conducts the air down through the liquid must be *movable*, that the exercise to the lung may be regulated by the depth to which it passes beneath the surface of the medicated fluid. When the lungs are strong, it should be carried nearly to the bottom. Those who are very weak, should commence with it only just below the surface of the water, and as they become strengthened carry it lower and lower.

In a perfectly adapted inhaler then the *materials* determine its purity—the *size*, the quantity of the fluid—the *shape*, the body of liquid through which the air has to be forced—and the *size of the tubes*, the freedom and ease of inhaling. In all these respects it must be carefully regulated to the strength of the lungs. An inhaler is not to be viewed merely as a glass bottle and an india rubber tube, but as an instrument scientifically adapted in all its parts to the object it has to fulfil. And that object is not merely to volatilize medicines and carry them into the lungs, but to do so of proper strength and without any fatigue or over exertion to the patient.

That there was not in use any such instrument prior to the introduction of the one contrived by myself is un-

deniable. Were proof necessary, it would be found in the fact, that even now, out of the many different forms of inhalers which are in use, there is not one—if I except such as are an imitation of my own—that is not defective in each of these particulars. It is amusing to see a tube the size of a goosequill stuck on the top of a cologne bottle and dignified with the name of an inhaler. Whatever medicines might be inhaled from such an instrument their effects must be more than neutralized by the exhaustion which the effort to inhale would occasion.

(b) THE ROOM VAPOR.—Many gaseous substances, and some that require combustion to render them volatile, are used, in a small room in the patient's house. The room should be eight, ten, or twelve feet square, and tolerably tight, to prevent the vapor becoming rapidly wasted. There are several means of filling this chamber. The first is by *chemical decomposition*; the second by *evaporation* from a *porcelain* dish for fluids, or a glass dish for solid substances, placed in a small sand bath over a spirit lamp: and the third by the *burning* of medicated pastiles. The nature of the remedy which it is necessary to use, always governs, of course, the manner of its volatilization. Into this room the patient goes once, twice, or thrice a day, as the case may require, remaining from fifteen minutes to half an hour at each *visit*. He may sit down and read, or amuse himself with any occupation during the time he is subjected to the vapor.

(c) THE VAPOR CHAMBER is an *air-tight* chamber containing 45 cubic feet of air; connected with it is a gasometer, capable of holding 8 cubic feet of gas. The patient is placed in the chamber, in the common air, when in an instant the whole contents of the gasometer can be discharged into it. The effect thus produced is first to

compress the air, and thereby increase its density; and second, to charge it with such gaseous medicines as the case may require. In this manner we increase or diminish the *oxygen* of the air at pleasure, and also make it *dry* or *moist*. This is, of all the inhalation forces, the most simple and yet the most powerful. Five or ten minutes once a day soon produces a marked change on the health of the patient. In ten minutes we can raise the pulse to 85, or lower it to 55, by changing the character of the gases thrown into the chamber.

All medicines reduced to vapor, and inhaled into the lungs, act locally upon the air-tubes and cells. To this direct action on the diseased surfaces, the comfort which patients experience from their use is due. They produce precisely the same effects that are attained by washes and ointments on external surfaces. When the mucous lining of the lungs is inflamed, there is always a considerable increase of secretion, and this is also rendered more *viscid* and tenacious, so much so in many cases, as to almost completely *block up* the bronchial tubes of the diseased part. When this latter takes place, that portion of the lung which should be supplied with air by the obstructed tubes, becomes collapsed, causing a great increase in the distress of the patient, from *shortness of breath*. The relief effected by *warm, soothing, and expectorant* inhalants in such a condition is prompt. The vapor soon softens the viscid muco-purulent secretion, and causes its expulsion. The air is again permitted to enter the collapsed portion of the lung, and the greatest amount of comfort and improvement immediately follows. Now if we could accomplish no more than this relief, it would be a great and desirable good to the patient. But it is unnecessary to say that the increased

amount of air which is admitted, acts upon the blood, increasing its purity, and raising the tone and health of the entire system. This, however, is not all the benefit attained by the local action of the inhaled vapors. After the secretions have been expelled we render them more *astringent*, and thus prevent its re-accumulation. Having improved the tone of the system, cleared the air-tubes of all retained matters, and astringed the mucous membrane, we next render the inhalants *stimulating*, with a view to rouse up the slumbering powers of the diseased organ, and cause the cicatrization of ulcerations, should these exist. In this manner, then, we accomplish an amount of improvement in the condition of the lungs, in the space of a few weeks, which could not possibly be attained by any other means, and which at once places the system in the best state for exerting all its powers to throw off the disease.

CONSTITUTIONAL ACTION OF INHALED REMEDIES.

No medicine can truly be said to *cure*. The most that medicines can accomplish is to remove those influences which obstruct the action of nature and paralyse her powers. I have told you how inhaled medicines do this by their local action. But it is to their power of acting upon the blood and through it on the absorbent system, that we look chiefly for the removal of the tubercular depositions, and the final restoration of the lungs to health. I am aware that some physicians speak of inhalation as a "*purely local treatment*," but such only manifest their ignorance, not only of the practice of inhalation, but also of the physiology of the lungs themselves.

The lungs present an absorbing surface, estimated by many physiologists at *fifteen hundred square feet*, and by none lower than an extent many times exceeding the entire surface of the body. This surface is designed by nature to bring the blood in the most direct manner possible under the purifying influence of the air. Now that this surface takes up all gaseous substances, whether medicinal or otherwise, contained in the respired air, has been amply proved by every physiologist, and there is no excuse for any physician being ignorant on the subject. For the enlightenment of such as are, we refer them to Professor Carpenter's "*Human Physiology*" (*American Edition*, 1852), Art. "*Inhalation and Absorption through the Lungs*." After demonstrating that "*the absorption of fluid may take place through the lungs*," Dr. Carpenter passes to the consideration of "*volatile matters diffused through the air*." Of the absorption of these he cites many instances:—"A familiar example," says he, "is the effect of the inhalation of the vapor of turpentine upon the secretions. It can only be in this manner that these gases act upon the system, which have a noxious or poisonous effect when mingled in small quantities in the atmosphere;" and he continues, "it is most astonishing to witness *the extraordinary increase in potency* which many subjects exhibit when they are brought in relation with the blood in the gaseous form." After giving many other illustrations of the promptness and power of inhaled medicines, he closes his observations with the remarkable passage which I quoted in an early part of the argument on treatment:—"It cannot be doubted," says he, "*that miasmata and other morbid (disease-producing) agents diffused through the atmosphere, are more readily intro-*

duced into the system THROUGH THE PULMONARY surface than by ANY OTHER. And our aim should therefore be directed to the DISCOVERY of some counteracting agents, which can be introduced in the same manner. The pulmonary surface affords a most advantageous channel for the introduction of certain medicines that can be raised in vapor, when it is desired to affect the system with them speedily and powerfully !” (p. 535.) In the very face of this proof, there are not wanting, I am ashamed to say, medical men, who ought to know better, and must know better, willing to speak of inhalation to their patients as a “*mere local treatment.*”

Well then, to return to the consideration of the constitutional action of inhaled medicines: I hold the doctrine here avowed by Professor Carpenter, that whenever it is desirable to affect the system *speedily and powerfully*, the medicine, if it can be rendered volatile, should be *inhaled*. By availing ourselves of this channel, we are able to overcome the tuberculous condition of the blood, to stay the further formation of tubercles in the lungs, and to promote the absorption and expulsion of those already deposited.

The practice then of administering medicines by inhalation in the treatment of pulmonary disease, is justified in a four-fold degree.

1st. It is *direct* ; it conveys the remedies to *cure* to the very seat of the disease to be *cured*, and does not subject them to the liability of undergoing change, which is always the case with medicine given by the stomach. The importance of this advantage has never been sufficiently weighed by physicians. No truism is better established, than that medicines employed for the cure of diseases, act with far greater certainty when they

have a *specific* tendency to the organ affected, or are applied directly to it; and no fact is better known than that the contents of the stomach often entirely change the medicines given, rendering them inert in one instance, and doubly active in another. Chemical union between acid and alkaline substances takes place as readily in the stomach as in the mortar of the chemist.

2d. Inhalation is *prompt*. Medicines given by the stomach when intended to act upon the lungs have to make the circuit of the system. When given by the lungs, on the contrary, they are brought instantly to the part which require their aid. Medicines in the gaseous state act with far greater promptness than as solids or fluids, because in the former condition they are subject to no further change, while in the latter they must undergo a process of decomposition. A vapor acts with the rapidity of touch. A solid, on the contrary, may lie in the stomach for hours before any effects are manifest. In this manner deadly poisons are often washed out by the stomach pump a considerable time after they are swallowed, without the least injury having resulted.

3d. Inhalation is more *powerful* than any other treatment, because remedies in the gaseous state act with a ten-fold greater power than when the same medicines are given as solids or fluids. Medicines act with promptness and power, just in proportion to the minuteness of their divisibility. A fluid is more powerful than a solid, and for the same reason a gas or vapor is more potent than either. In the language of Dr. Carpenter, it is most astonishing to witness the extraordinary increase in potency which medicines exhibit when brought in relation with the blood in the gaseous form. This is

easily understood, when you consider that medicated vapors are medicines in their most delicate and attenuated form—the essence, as it were, separated from all crudity, and subject to no further changes. As they are received into the lungs, so do they pass into the system; you can detect them twenty minutes afterwards in every secretion. There is no action which it is desirable to produce on the lungs themselves, or on the condition of the blood, which cannot be produced with ten-fold greater certainty by inhalation than by any other possible form of administration.

4th. Inhalation is not only direct in its application, and prompt and powerful in its action, but it is in itself an *elegant* and *delicate* process, free from every objection. There is no patient so *weak* that he may not employ it without fatigue, nor any so sensitive to the unpleasantness of swallowing “*pills*,” “*powders*,” or “*mixtures*,” as to experience the least discomfort from inhaling. No man or woman, however strong-minded, takes nauseous drugs without a strong effort of the will. It is a revolting necessity. How often does it happen that they altogether neglect their health, from an unwillingness to swallow medicines which they know beforehand will increase their discomfort. Could they do so without present disgust and subsequent inconvenience, few persons, we are convinced, would neglect the use of the means required for the preservation of their health. Now, inhalation at once overcomes all those objections, and in all affections of the respiratory organs, throat, air-passages, and lungs—enables us to produce the most direct, speedy, and powerful effects, without causing the patient the slightest discomfort.

THE REMEDIES EMPLOYED.

But, we are frequently asked—What remedies do you employ for inhalation? We use, as the case may demand, almost every remedy of the *Materia Medica* that can be volatilized. We have no patent nostrums—no fixed formulæ—no infallible compounds—and until it can be demonstrated that disease is a *fixity*, and the constitutions, the sympathies, and the sensations of mankind an *unity*, and all idiosyncrasies a *myth*, we cannot but regard those physicians who suppose it possible to reduce the *practice* of inhalation to uniform prescriptions as hopelessly ignorant of *the simplest* principles of medicine.

Inhalation, rationally and scientifically employed, is essentially distinct from the use of particular remedies. The inhalants administered require to be as various in their components and combinations, as are the indications to be fulfilled by their use. As a method of treatment, inhalation embodies the results attained from every source of investigation.

From the accumulated stores of medical botany, and the delicate and numerous contributions of chemistry, we are able to cull remedies to meet each symptom, stage, and form of pulmonary disease, with as great precision as we can select others for the cure of fever or inflammation.

Had I suggested merely some particular medicine—as the iodine and conium of Scudamore, the tar inhalations of Chrichton, or the chlorine of Gannal, a mere announcement of the name would have been sufficient to enable every physician to employ it in his practice. But, having made a complete revolution in the treat-

ment of a whole class of diseases so intricate as those involving the organs of respiration—having taught new doctrines in regard to the essential nature of the most fatal of these—and based not a particular medicine, but a particular method of treatment, upon such doctrines, so simple a course would not do. The practice of inhalation has in fact called into use a new *Pharmacy* and a new *Dose Book*, and retains nothing in common with the administration of medicines by the stomach but the *Materia Medica*.

All that we claim to possess beyond the educated members of our profession is a more correct theory of the nature of consumption—a better acquaintance with the uses and properties of medicines when inhaled, and greater *experience* in the treatment of consumptive cases.

But what is experience? Medical science is essentially founded upon it. What is not so based cannot be called science, for it is more likely to be false than true. Experience is that which distinguishes the practical physician from the speculative theorist. No man ever yet contributed aught to the stock of medical knowledge honorable to himself or of advantage to the world, who did not learn it in the practical school of inductive philosophy. Medical science has unhappily profited less than any of the other sciences by induction. The bane to progress has ever been the tendency to base principles of practice on false theories. The theory that consumption is a constitutional disease, arising from an inherited vice of the entire system, has been more destructive of human life than the combined agencies—war, cholera, and the plague. No treatment based on such an assumption could possibly succeed. Experience dissipates such vagaries, and is the only agency of progress.

It is no more necessary for the command of armies or the ruling of empires than for the building of a house, the construction of a watch, or the piloting of a ship. From the most exalted and responsible station to the humblest occupation of life it is the test of appreciation and of power. And yet if experience is necessary to these how much more is it to the physician. The commander may repair disaster by a bold advance or a skilful retreat—the statesman by a change of policy—the builder may strengthen his wall by a buttress—and the watchmaker can readily remake the wheel which he is so unfortunate as to spoil through an error of judgment. But, alas! who can repair the errors of the physician? Who can remake an organ destroyed, or bring back the archæan spirit after it has fled? If disease is mistaken, or medicines misapplied, Death leaves us no remedy.

THE SUGAR VAPOR CURE.

Some years since a specific kind of inhalation, the "*Sugar-House Cure*," as it was called, was formally announced in the Southern Medical journals; from these it was copied into those of the Northern States, and very soon found its way into the daily and weekly newspapers throughout the whole Union. In consequence of the wide publicity it attained, many were induced to resort to the sugar plantations of the South in hopes of relief. Among these may be mentioned the late lamented Vice-President King, who spent the winter before his decease on a sugar plantation in Cuba, from which he returned to his home in Alabama in the spring and died a few days afterwards. The trials of this remedy have been sufficiently numerous to establish that while unmistakable

benefit has resulted from it in a few cases, injury or no benefit has followed its employment in the majority.

But when we look at the indiscriminate and empirical manner in which it has been resorted to, this result is precisely what might have been expected. To hope for the cure of pulmonary consumption,—a disease, than which there is not in the long catalogue of human maladies one more dissimilar in its several stages, more intricate in its varieties, more complicated by sympathies, or governed by idiosyncrasies—by the employment of one and the same remedy in all cases, of the same strength and in the same manner of application, is a vain delusion. To succeed, it must promote the *absorption* of incipient tubercles, cause the suppurating of crude cheesy tubercles, and heal tuberculous ulcerations, the indications for the treatment of which are essentially different in each instance. Profuse exhausting expectoration in one case, and scanty and difficult expectoration in another, must be, by it, diminished in one case and increased in the other. Surely it does not require a very profound acquaintance with medicine to know that such a thing is impossible; we have no medicine that will produce two directly opposite effects from the same form of administration. It would be as possible for water to be *hot* and *cold* to the same part at the same instant. Common sense, without any medical education, should be sufficient to teach those who possess it, that if opium will check diarrhœa, it cannot be a remedy for constipation, which is the very opposite—that if five grains of antimony will cause A to vomit, it cannot be a proper dose to stop vomiting in B; and yet if sugar vapor cured consumption in all its stages and varieties, it must, in this manner, produce the most opposite effects—it must increase the expectoration of A

—diminish that of B—soothe the lungs of C—stimulate those of D—cause suppuration in E—and absorption in F—the impossibility and absurdity of which is sufficiently apparent.

We may sum up this “*Sugar vapor*” cure by observing that it is applicable to a very small proportion of cases, and hurtful, or not beneficial, in all others. To be employed with any success, or indeed with safety, the variety and peculiarity of the case must be favorable to its use, and of such there are not five cases in a hundred.

PINE FOREST CURE.

The same may be said of the influence of “*pine forests*.” The resinous and balsamic emanations with which the atmosphere is impregnated, when inhaled by the patient, are in a very limited number of cases of undoubted advantage; but in all cases where any tendency to irritation of the lungs exists, or where softening of tubercles is going on, such an atmosphere increases the cough, frets the lungs, and adds to the patient’s distress and danger.

MARSH AND COWHOUSE CURES.

With the “*Sugar house*” and “*Pine forest*” cures, we may class the influence of “*Malaria*.” It was claimed many years ago that Consumption was rare among the inhabitants of malarious districts; and from this it was inferred that such malaria might prove not only preventative but curative. The suggestion was acted upon, and many were sent from the comforts of home to live for months together in miserable hovels, on the borders

of noisome fens, teeming with vegetable and animal putrefactions.

And to these we may also add the vapor of the "cow-house," which, half a century ago, was in vogue as a remedy for consumption. At comparatively a recent date, a Scottish nobleman, from having known several unmistakable cases of cure from this influence, fitted up a bed for his daughter in his byre. What a commentary this is on the usual treatment! A father, whose wealth and station enabled him to procure all that science had to offer, yet, from a knowledge of their utter inutility, preferred to intrust his daughter's life to the possibility of benefit from inhaling the disgusting odor of the cow-house.

That good, and often wonderful, effects have resulted from each of these influences cannot be denied; and as facts *in favor of inhalation*, they lose none of their value because counterbalanced by so great a number of failures as to discourage future trials with the same substances. They show us that cure is possible by inhalation, and, in a limited number of cases, from the most improbable agencies.

THE MORTALITY FROM CONSUMPTION.

It will be remembered that in my former lecture I pointed out the fact that the mortality from consumption was never higher than at the time when cod-liver oil was the favorite medicine with the profession. This was the case from 1851 to 1854. In the first three months of 1854 there were from consumption 843 deaths. At this time inhalation had just struggled its way, through good report and evil report, into public favor. And

what was the result in the number of deaths from this disease? Why, in a corresponding period of the next year, 1855, the mortality had decreased to 766 deaths, being a diminution of more than 25 per cent. Inhalation was now high in favor. Thousands resorted to it, and what was the consequence? In the corresponding period of last year the deaths from consumption fell to 580, being a decrease of more than 31 per cent., and this, too, without taking into account the increase in population which had taken place in the two years. Look, too, at the mortality for the last three years: in 1854, the number of deaths from diseases of the lungs was 6154; in 1855, it fell to 5765; and in the last year to 4825. Here we have the actual salvation of more than thirteen hundred lives in the course of two years.

Are not *these* results to cheer the hearts of those that are wavering between hope and despair? Are not these results to inspire the mind of the physician with some degree of pride and enthusiasm for his profession? and ought they not to be sufficient to banish to the shade of departed errors, the miserable mockery of administering medicines by the stomach, which never have, nor ever can, effect the cure of pulmonary consumption? Truly, they ought to have been sufficient, and yet, in the very face of these facts, there are to be found some so wedded to their idols that they still pretend to be opposed to our practice. I say *pretend*, because I do not believe there is one medical man in the city who is *honestly opposed*. I know that many who were the most bitterly hostile two years ago, now actually prescribe inhalations to their consumptive patients—very quietly, of course—they do not care to proclaim it abroad; they do not think it at all necessary to tell

their patients that two years ago they were so unjust to this practice as to call Dr. Hunter sundry hard names for introducing it. Now they coolly borrow my inhaler, or make a rude imitation of it, and appropriate my practice, as far as they are able to do so with the little *experience* they have of the action of *INHALED medicine*.

What do you think of such men as Dr. Willard Parker, Dr. Camman, Dr. Horace Green, Dr. Clark, Dr. Alexander B. Mott, Dr. Dixey Crosby of the Vermont Medical College, Dr. Bowditch of Boston, and a host of others whom I might name, who are at this moment all in the habit of recommending inhalation. We have been called upon to prescribe for persons who were previously under the care of these physicians, and on whom they had been *practising* inhalation. Why do these medical gentlemen employ inhalation? They do so because they know that they cannot hope to save their patients by any other means. I do not mention such facts as a matter of reproach to these physicians, but as the reverse. I think it highly honorable to them that for the good of their patients they have laid aside their dogmas and their prejudices. We rejoice at it, and are glad to see them "sailing in our waters." But there are others in the profession who will not be convinced of the efficacy of inhalation. These hunt about until they find some unfortunate case where inhalation was tried, and yet the patient did not recover. Such case they blazon abroad as a proof that it is a false practice, while the twenty cases wherein it has restored the patients to health they pass by without comment. They overlook too the fact that for every patient who has failed to recover under inhalation, they can find twenty who have died under the usual practice.

But why should I waste your time and my breath to defend inhalation from the slanders of such as these—it has ever been thus, and ever will be so long as envy and rivalry exist. I cannot therefore better conclude my lecture than by showing you, how remarkable a coincidence there is in this respect between my fate and practice, and that of Dr. Jenner and his discovery of vaccination.

A little more than fifty years ago, an angry and rancorous controversy grew out of his famous discovery of vaccination. He announced that the virus of the "*cow pock*," when introduced into the human system, had the power of preventing the ravages of small-pox—a disease which, up to that period, spread its desolating influence over the whole globe. Notwithstanding he gave ample and undeniable proofs, not only of the correctness of his opinion, but that vaccination was free from danger and every objection, yet many eminent physicians still continued to oppose it. They denounced it in the medical societies, wrote against it in the medical journals, and whispered in the ears of too confiding patients the direful consequences to which they would expose themselves by submitting to be vaccinated. But in defiance of these obstacles the practice went on rising steadily in public estimation. At length a surgeon, of the name of Stuart, determined to make a last desperate effort to destroy its reputation.

Surgeon Stuart was a man who delighted in the marvellous. His powers of imagination were so great that he was able to describe persons whom he had never seen, and effects which he had never witnessed, with more than the vividness of reality. After giving a great many different reasons why vaccination had no power to pre-

vent small-pox, and declaring that it would increase, rather than diminish, the ravages of that scourge, he proceeded to consider the more immediate "*consequences which must result*" from its general introduction. To give force and point to his remarks he introduced many cases which he had heard of, or which some of his friends had heard of, wherein it had completely changed the moral nature of the vaccinated.

The following case we commend as a model to that class of modern objectors who, without having themselves contributed one practical idea to medical science, are ever ready to cavil at, and misrepresent, the labors of others :

"Among the numerous shocking cases of cow-pock," observes Surgeon Stuart, "which I have heard of, I know not whether the most horrible of all has been yet published, viz. of a child, at Peckham, who, after being inoculated with the cow-pock, had its former natural disposition absolutely changed to the brutal; so that it ran upon all-fours like a beast, bellowing like a cow, and butting with its head like a bull!!"

Remarkable as is the above case, it is scarcely more wonderful than some of the consequences which are said to follow the use of inhalation. One physician in this city, who has lived years enough to acquire experience, admits that we "*do sometimes dry up ulcers in the lungs by inhaling* ; truly a most important admission. "*But,*" continues he, "*in such cases they only send the poison of the disease into the circulation to manifest itself in another form, out of the reach of remedy.*" Now, considering the terrible nature of consumption, and how necessary the lungs are to life, we confess we are at a loss to imagine what new disease more fatal can be set up,

or what organ more important can become its seat. But supposing, for the sake of humoring the Doctor's objection, that the inhalations carry the poison of the disease into the blood, will the medicines not be transmitted wherever the blood can carry it? And if they are sufficient to drive it from the lungs, will they not be equally potent in expelling it from the blood through some of the outlets of the body—the *skin*, the *kidneys*, or the *bowels*? But we are arguing against a shadow. There is not one fact to sustain his objection on record, nor has he had the hardihood to give, even on his own authority, a single proof of its truth. Until these are produced we fancy all who are so unfortunate as to have disease of the lungs will prefer to have such disease cured by inhalation, even at the risk of the Doctor's bugbear; while not a few will consider his predictions as about on a par with those of "*Mosely*," whom the author of "*Vaccine Phantasmagoria*" has immortalized in the following humorous lines.

Oh, Mosely! thy books nightly phantoms rousing,
Full oft make me quake for my heart's dearest treasures;
For fancy, in dreams, represents them all browsing
On commons, just like little Nebuchadnezzars.

There, nibbling at thistles, stand Jim, Joe, and Mary,
On their foreheads (oh horrible!) crumpled horns bud;
Here Tom with a tail, and William all hairy,
Reclined in a corner and chewing the cud!

The world would indeed be changed if there were not some to circulate scandal and retail idle gossip in regard to inhalation, when fifty years ago there were so many to detract from the merits of Dr. Jenner's discovery of vaccination. Those who relate *silly stories* are not con-

fined alone to the nursery. We are almost daily edified by hearing of new and marvellous reports put in circulation by those whose professional education ought to have saved them from such ridiculous puerility. Such artifices can only serve to degrade those who employ them. They failed to prevent the introduction of vaccination at a period when the mass of mankind were less intelligent and far more superstitious than they are now; they cannot but fail to mar the fame of inhalation so long as it continues to be upheld by sound reasoning and successful practice.

It has been urged, too, as a matter of reproach by some cavillers, that I am in the habit of receiving cases of consumption under my charge which are "*past all hope of recovery.*" If I have not withheld my assistance from those who have appealed to me in the last extremity, it has been because I could not look with an unpitying eye upon sufferings which I had the power to relieve. When the mind of the invalid, despairing of any benefit from the prescriptions of his physician, kindles a hope that inhalation may yet be able to save him, and in this spirit seeks my advice, it is not for me to refuse the responsibility through personal considerations. It may be that I feel it as a severe and unjust test of the merits of my treatment, and I may also anticipate the carping of those whose interest it is to hide their own ignorance and neglect, but these are not reasons to weigh against the obligations of *humanity*. Happily I am not without an ample justification and reward in the results of experience.

The physician should take a higher and nobler view of his duties in prescribing for the sick than to stay and ask himself what may be the effect upon his professional repu-

tation. To me it seems as much his mission to mitigate, by every means within his knowledge, the pains and tortures of disease after it has become *incurable*, as it is to strive for the recovery of a patient before it is so. Many a death-bed has been made easy, and the lamp of life permitted to go quietly out, through timely ministrations of medicine, which would have been racked with agony had these been withheld. *Medicine* should be to the *body* what *religion* is to the *spirit*—the staff of reliance in health, and the solace and comfort in death. I plead guilty to the crime of having prescribed for many, very many, who were reduced to the last condition of hopeless misery, and for this humanity have only one regret to offer—that I have not found more physicians to bear me fellowship. One consolation, too, I have, and it is one which will not be easily taken from me—none can say, in truth, that I have ever withheld from a patient a knowledge of the real peril of his situation; or, in one instance, been guilty of the cruel mockery—too common in our profession—of encouraging hopes which were not likely to be realized.

Let none, then, in future think to reproach me by the charge of prescribing for the dying, after they have deserted them. This, which they think dishonor, I esteem as the highest commendation, and pray that the day may never come when the invalid, in despair, or in poverty, shall knock for succor at my door without receiving the utmost in my power to bestow.

Sustained by the rectitude of my own motives, and aided by the approving voices of the wise and the good, I shall pursue my purpose steadily to its consummation—the division of the profession into specialties—the diffusion of medical information among the people—and the

establishment of inhalation as the only successful or scientific mode of treatment in pulmonary diseases. In striking at the root of error and prejudice in our profession, I cannot hope to escape having my views misrepresented, the success of my practice denied, and my personal character defamed. These are a legacy bestowed upon all who seek to improve the healing art. But, although I am not able to escape these, I may be permitted to adopt the maxim of the great and good Boërhavé: "Slander is but a spark—blow upon it and it may kindle into a blaze, but left alone it will die out of its own accord."

